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15 February 1983

MEMORANDUM FOR: Herb Meyer, VC/NIC

FROM : [] NIC/AG

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THROUGH : Hal Ford, D/AG

SUBJECT : Estimating Future Western Dependence on Middle Eastern Oil

1. The short answer to your query is that available evidence is persuasive that the United States, the West, and the free world generally will remain dependent (in varying degrees, of course) on Middle Eastern oil supplies for the foreseeable future.* Such a conclusion was reached in the recently completed projections for NSSD 9-82, Energy Outlook and Security for the 1980s. [] This study synthesized and refined forecasts from five major oil companies, several governments, consulting firms, and international organizations; these forecasts used both econometric models and market analyses. CIA was the principal contributor to this study, which was fully coordinated with NSC, State, Energy, Defense, JCS, DIA, OMB, Council of Economic Advisors, and the White House Office of Policy Development. I will gist a few of the pertinent findings, highlight several of the key assumptions, and add a comment or two in summary.

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2. Gist. NSSD 9-82 arrived at the following conclusions:

a. Free world oil consumption is expected to rise slowly from 49 million barrels per day (b/d) in 1980 to 50-53 million b/d in 1990, and 55-58 million b/d in 2000.

b. The free world will remain dependent on OPEC oil for about half its oil requirements through the 1990s, roughly 24-30 million b/d. (In particular, oil exports from the Persian Gulf countries are expected to account for at least one-third and perhaps as much as 40 percent of free world oil needs through the end of the century. The chief reasons are the huge oil reserves there--about 60 percent of the world's total--the excess productive capacity, and the lower production costs possible in the Gulf countries.)

* In preparing this memo, I have consulted with [] Energy Issues Branch, OGI; and NIC officers [] [] Ted Atkeson, [], Maurice Ernst and Hal Ford.

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c. In the industrialized nations, both oil consumption and oil imports are projected to decline somewhat in the remainder of this century. But OECD dependence on oil imports as a fraction of oil consumption will remain fairly stable at about 60 percent.

d. OECD countries will probably rely on OPEC oil for half the total import requirements for 1990--about 10 million b/d. The Persian Gulf will supply about 6-7 million b/d of this total.

e. NATO countries will probably depend on Persian Gulf oil for about 40 percent of import requirements in 1990. This is below the 46 percent import figure in 1973 (due chiefly to price-induced conservation and increased domestic production) but is higher than last year's figure of 38 percent.

f. Oil import dependency will vary by country. Japan will depend on imports for nearly 100 percent of its total oil requirements through the end of the century; Western Europe, 60-80 percent; the US, 30-40 percent. Which specific countries will supply the bulk of each importing nation's oil is harder to predict since those relationships will be affected by changing contractual arrangements and various political developments.

g. For the US, oil consumption is also expected to decline slightly from about 17 million b/d in 1980 to 16 in 1990. But net oil imports are expected to increase from 5.4 million b/d to about 6 million b/d between 1981 and 1990, as a result of a projected decline in domestic production. If domestic production does not decline, imports would be about 5 million b/d. US import projections after 1990 range from 4-6 million b/d due in large part to uncertainty about the potential contribution of synthetic fuels to energy demand.

h. How vulnerable the West will be to supply disruptions depends chiefly on what surplus oil productive capacities will exist. Current free world totals of about 10 million b/d surplus capacity can probably handle even moderate supply disruptions (if Saudi sources are not cut off). Depending on the estimated demand range, free world surplus capacity is projected to range between 6-9 million b/d in 1985, and in 1990 it may range from 1-8 million b/d. Thus, a low demand scenario in 1990 affords some protection against supply disruption; a high demand scenario will markedly increase vulnerability to even small disruptions in oil supplies. In general, and especially during periods of cyclical peak demand, the loss of a substantial portion of Persian Gulf oil would probably create worldwide shortages, as in 1973 and 1979, and related economic disruptions would result.

TOP SECRET

TOP SECRET

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3. Assumptions. The key assumptions of the NSSD 9-82 are:

- o Price pattern: declining real prices for oil through the mid-1980s, then rising thereafter by 2-3 percent yearly through the year 2000. (The price changes need not necessarily be smooth ones).
- o Economic growth: free world yearly growth averages were pegged at 2 percent for the lower limit, 4 percent for the upper limit. In addition, the study also accounted for the impact of business cycles.
- o Efficiencies: continued sharp gains in energy efficiencies are assumed (e.g., the amount of energy needed to produce one unit of GNP is expected to fall by 8 percent during the 1980s).
- o Price elasticities: in general, oil demand is treated as inelastic (relatively unresponsive to price changes) over the short-term, though somewhat more responsive over the longer-term.
- o Free world productive capacity: expected to average 56-57 million b/d into 1990, though subject to possible variations in price patterns which may influence demand levels. In general, the bulk of this capacity, about 33 million b/d, is in OPEC producers, of which about 23 million b/d come from Persian Gulf countries. Non-OPEC production is estimated at about 23 million b/d. These figures are expressed at the midpoint of the range of maximum sustainable capacity. (Non-OPEC capacity estimates were rounded upward to account for small amounts of underutilized capacity that might exist in some areas).
- o US oil production estimates range from 7 to 10 million b/d for 1990 (US production was 10.2 in 1982). This range attempts to account for differing estimates of remaining US reserves and differing projections of price incentives.
- o Communist oil production is not a decisive factor in these calculations. All forecasts point to a continued decline in net Communist oil exports to the free world. While there are uncertainties about future Soviet oil production, the clustering of forecasts around a zero net Communist export level for 1990 appears plausible to specialists. Some analysts believe the Communist nations may become net oil importers.

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4. Comment. Forecasts can be wrong--and indeed, they often are. And the further out we look, the less certain we must be. But the assumptions of NSSD 9-82 seem reasonable, the projections plausible. Of course, much can change, and particularly those things that we cannot easily foresee such as significant technological breakthroughs, major new oil discoveries, political reversals affecting principal suppliers, or a national energy policy of maximum development and minimum consumption. Presently, however, most of the world's cheap oil reserves are found in the Persian Gulf, and this will surely continue to be a key factor in energy supply trends for the foreseeable future. Because the production costs of Persian Gulf oil are such a small fraction of oil market prices, and the reserves there so great, whoever controls the Persian Gulf will have a disproportionate influence on the world's oil market. Thus, Persian Gulf oil will remain central to Western energy security.

5. Still, while continued US and Western dependence on Persian Gulf oil is authoritatively projected in NSSD 9-82 for the remainder of this century, there are many separate strategic issues resulting from this dependence which are thoughtfully raised in General Atkeson's US Strategy Critique, published by the Army Concepts Analysis Agency. Such issues include the role and mission of the RDJTF, US military capabilities to defend against a Soviet invasion of Iran, and the overall military wisdom of the Southwest Asian strategy. Despite their significance to US security, under current circumstances these issues may not be examined adequately in inter-agency discussions. Most notably, an NSDD on a comprehensive energy security policy is currently in draft; its military-security portion (scheduled to be completed before 31 December 1983) presently does not seem to cover these military points. Because these discussions could clearly profit from a fuller consideration of the points raised in General Atkeson's Critique, this NSDD process may provide an appropriate and timely opportunity to examine the larger military and strategic implications of the projected Western oil dependence.

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cc: Harry Rowen, Hal Ford, Maurice Ernst, Ted Atkeson,

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